

CLAIMS

1           1.    A method in a network for wireless communications for  
2 pushing data through a data packet network utilizing a dynamic  
3 addressing scheme, comprising:

4           transmitting, from a push server to a DNS, a look up signal  
5 for a specified domain name;

6           transmitting, at the push server, the reserved dynamic IP  
7 address to the push server; and

8           activating a context through the data packet network.

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1           5.    The method of claim 5 wherein the received signal  
2   requesting that a dynamic IP address be reserved is in the form  
3   of a DNS lookup request signal.

1           6.    The method of claim 1 wherein the step of activating a  
2   context includes the step, in a GGSN, of receiving push data for  
3   a mobile terminal and also receiving the reserved dynamic IP  
4   address from the push server.

1           7.    The method of claim 6 further including the step of  
2   transmitting the reserved IP address to a DHCP server to obtain  
3   a mobile station ID.

1           8.    The method of claim 8 further including the step of  
2   transmitting the received mobile station ID from the DHCP server  
3   to a home location register to determine the identity of a  
4   serving GPRS support node whereby the context activation is  
5   established with the identified serving GPRS support node.

1           9.    A method in a Gateway GPRS Support Node for pushing  
2 data through a data packet network utilizing a dynamic  
3 addressing scheme, comprising:

4           receiving a reserved dynamic IP address and push data from  
5 push server;

6           transmitting a request for ID information to a DHCP server  
7 relating to the reserved dynamic IP address;

8           receiving the requested ID information; and

9           activating a context through the data packet network so  
10 that the push data may be transmitted to its destination having  
11 the reserved dynamic IP address.

12           10. The method of claim 9 further including the step of  
13 transmitting a request to an HLR to identify a serving GPRS  
14 support node that is presently serving the mobile terminal for  
15 which the reserved dynamic IP address was reserved and to which  
the requested ID information corresponds.

1           11. The method of claim 10 further including the step of  
2 activating the context and transmitting the push data to the  
3 identified serving GPRS support node.

12. A gateway GPRS support node (GGSN), comprising:

circuitry for receiving push data in relation to a reserved dynamic IP address in a data packet network; and

circuitry for prompting a DHCP server to provide ID information that corresponds to the reserved dynamic IP address prior to a context being activated.

1        13. The GGSN of claim 12 further including circuitry for  
2        delaying the activation of context until the ID information is  
3        received from the DHCP server.

1        14. The GGSN of claim 12 further including circuitry for  
2        generating a request to a home location register to request the  
3        identity of a serving GPRS support node that is presently  
4        supporting the destination mobile terminal for the push data.

1        15. The GGSN of claim 12 further including circuitry for  
2        delaying the activation of context until a response is received  
3        from the home location register identifying the SGSN.

1           16. A domain name server, comprising:  
2           circuitry for receiving a domain name lookup request from a  
3           push server to determine an IP address that corresponds to a  
4           received domain name; and  
5           circuitry for transmitting a request to a DHCP server to  
6           prompt it to temporarily reserve a dynamic IP address for  
7           delivery of push data to a mobile terminal.

1           17. The domain name server of claim 16 further including  
2           circuitry for receiving a reserved dynamic IP address from the  
3           DHCP server that corresponds to the received domain name.

1           18. The domain name server of claim 17 further including  
2           logic to generate the received reserved dynamic IP address to  
3           the push server.